

REMARKS

The Office action dated February 1, 2007, and the references cited therein have been received and carefully reviewed.

As a result of the Office action, claims 25 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 25 and 26 have been canceled without prejudice or disclaimer, thereby rendering the Section 112, second paragraph, indefiniteness rejection moot.

Moreover, claims 1-9, 11, 12, 16, 17, 19-22, and 27-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki. Claims 1-11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamaoka II in view Ooki. And, claims 18 and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki in view of Hamaoka II. These references have been carefully reviewed but are not believed to show or suggest Applicants' invention as now claimed invention in any manner. Reconsideration and allowance of the pending claims is therefore respectfully requested in view of the following remarks.

By the above amendments, claims 1, 16, 20, 27, 30, and 31 have been amended and are now believed to be patentable over the prior art. More specifically, Applicants respectfully

submit that none of the cited prior art references, taken individually or in combination, discloses a rotation angle detecting device that utilizes a magnetoresistive sensor and magnets that are ferrite, as required by claims 1, 16, and 20, and further a controller for calculating a linear angle output, as required by claims 27, 30, and 31.

Applicants respectfully disagree with the Examiner's assertion that Suzuki discloses magnets that use ferrite materials. Rather, Suzuki discloses magnets comprising of rare-earth materials. Moreover, Applicants respectfully submit that the combination of magnetoresistive sensor and ferrite magnets is not obvious from the prior art combination for the following reasons: For example, in Ooki, the Hall element is used to detect the intensity of the magnetic field. A ferrite based magnet tends to cause greater change in the magnetic force in response to temperature than would be realized if a rare earth magnet is used, and therefore, error in detection may result due to this change of magnetic force. Therefore, it is not preferred to use ferrite. In general, rare earth metal is used in combination with the Hall element. In fact, known sensors that are being marketed use rare earth metal.

For the same reasons stated hereinabove, it is not preferred to use ferrite based magnets with magnetoresistive sensors. Underlying the present invention is the Applicants recognition to use a magnetoresistive sensor so that it can detect the direction of the magnetic field in order to provide a sensor that does not cause detection error even if the ferrite based magnets (that tends to greatly change its magnetic force in response to change of temperature) is used (support for this limitation is found in paragraphs 22 and 33). Thus, even if the magnetic force has been changed, the direction of the magnetic force does not change.

As for claims 27, 30, 33, Applicants submit that none of the cited prior art references teaches the use of controller capable of calculating a linear angle output, as now required by those claims (support for this limitation is found in paragraphs 22 and 33). Therefore, in view of foregoing, it is respectfully submitted that the claimed invention is patentable over the prior art.

Claims 2-13 and 15 are dependent from claim 1 and are therefore believed to be allowable for the same reasons as claim 1. Claims 17-19 are dependent from claim 16 and are therefore believed to be allowable for the same reasons as claim 16. Claims 21-16 are dependent from claim 20 and are

therefore believed to be allowable for the same reasons as claim 20.

Applicants submit that the application is now in condition for allowance, and an early notice to that effect is earnestly solicited. If any issues remain that can be clarified by telephone, Examiner Whittington is encouraged to contact Applicants' Representative at the number indicated below.

Respectfully submitted,
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